TITLE: ●EM AND METHOD OF A MINIMIZED REPRESENTA●● OF A SECTOR
VARIABLE-BITS-PER-INCH TABLE
INVENTORS NAME: Chee S. Toh et al.
DOCKET NO.: 934.125US1

1/11

141
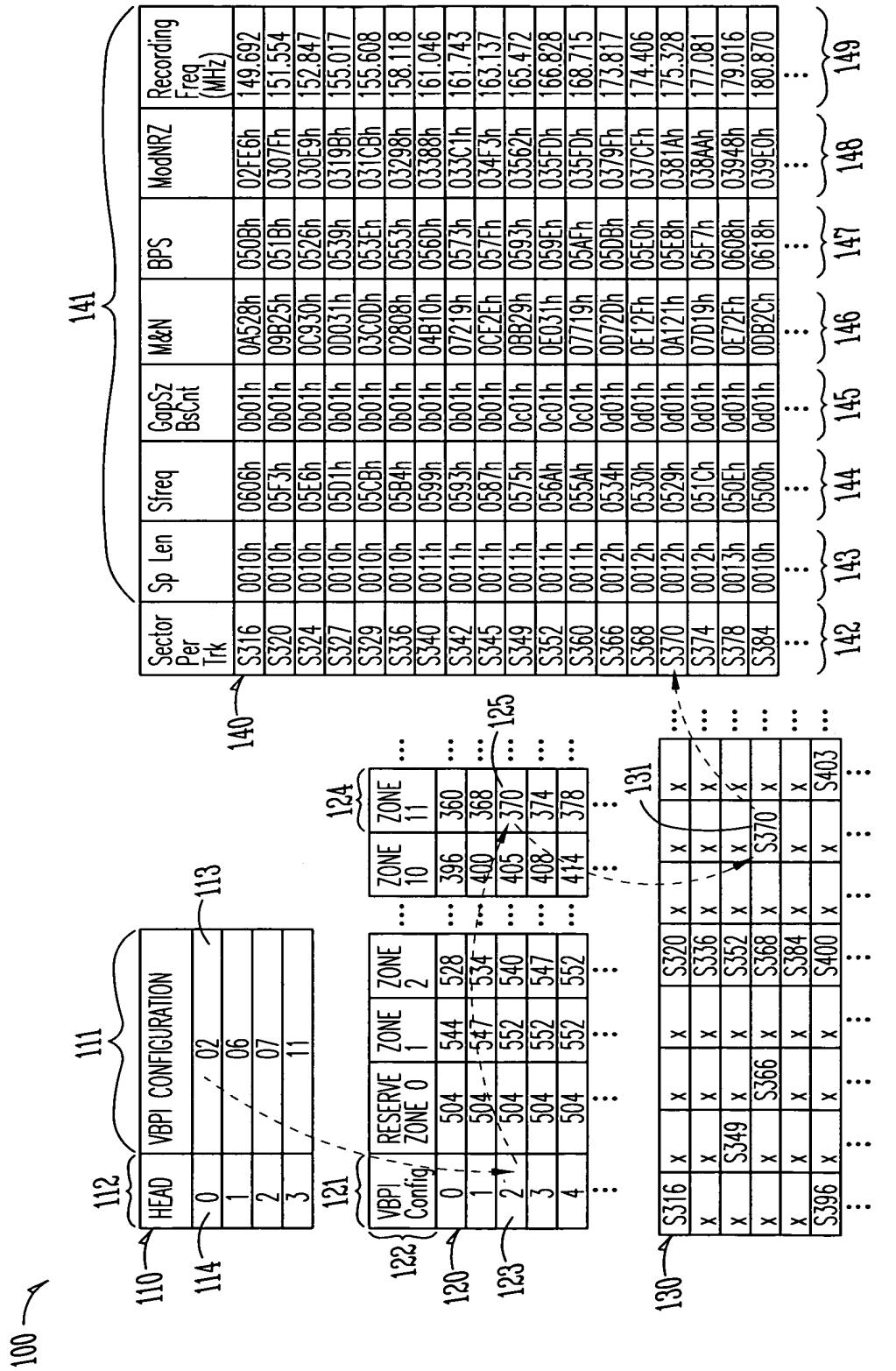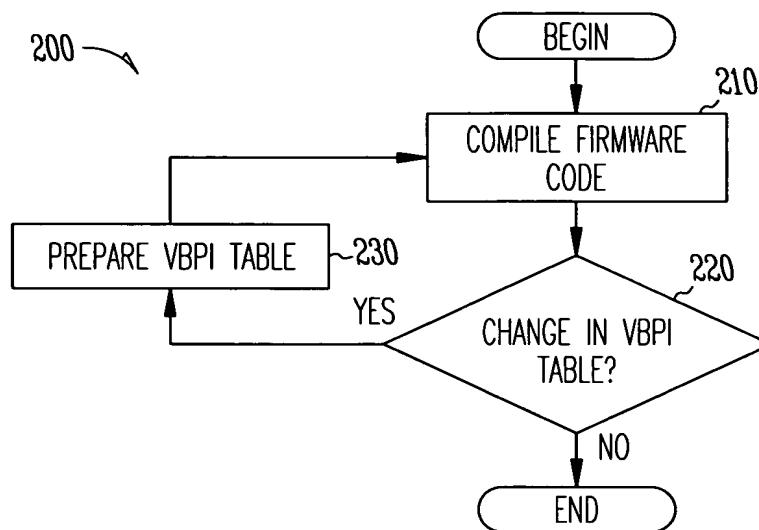
Sector Per Trk	Sp Len	Sfreq	GapSz BsCnt	M&N	BPS	ModNRZ	Recording Freq (MHz)
S316	0010h	0606h	0b01h	0A528h	050Bh	02FE6h	149.692
S320	0010h	05F3h	0b01h	09B25h	0518h	0307Fh	151.554
S324	0010h	05E6h	0b01h	0C930h	0526h	030E9h	152.847
S327	0010h	05D1h	0b01h	0D031h	0539h	0319Bh	155.017
S329	0010h	05CBh	0b01h	03C0Dh	053Eh	031CBh	155.608
S336	0010h	05B4h	0b01h	02808h	0553h	03298h	158.118
S340	0011h	0599h	0b01h	04B10h	056Dh	03388h	161.046
S342	0011h	0593h	0b01h	07219h	0573h	033C1h	161.743
S345	0011h	0587h	0b01h	0CE2Eh	057Fh	034F3h	163.137
S349	0011h	0575h	0c01h	0BB29h	0593h	03562h	165.472
S352	0011h	056Ah	0c01h	0E031h	059Eh	0356Fh	166.828
S360	0011h	055Ah	0c01h	07719h	05AFh	035FDh	168.715
S366	0012h	0534h	0d01h	0D72Dh	05DBh	0379Fh	173.817
S368	0012h	0530h	0d01h	0E12Fh	05E0h	037CFh	174.406
S370	0012h	0529h	0d01h	0A121h	05E8h	0381Ah	175.328
S374	0012h	051Ch	0d01h	07D19h	05F7h	038AAh	177.081
S378	0013h	050Eh	0d01h	0E72Eh	0608h	03948h	179.016
S384	0010h	0500h	0d01h	0DB2Ch	0618h	039E0h	180.870
...	...	...	...	...	...	...	...
142	143	144	145	146	147	148	149

140

Table 110 (113 VBPI CONFIGURATION, 111)

HEAD	VBPI CONFIGURATION
0	02
1	06
2	07
3	11

112 114

Table 120 (121 / 122 / 123, 124)

VBPI Config	RESERVE ZONE 0	ZONE 1	ZONE 2	...	ZONE 10	ZONE 11
0	504	544	528	...	396	360
1	504	547	534	...	400	368
2	504	552	540	...	405	370
3	504	552	547	...	408	374
4	504	552	552	...	414	378
...	...	...	...	...	...	...

125

Table 130 / 131

S316	x	x	x	...	x	x	...
x	x	S349	x	...	x	x	...
x	S336	S352	S366	...	S370	x	...
x	x	x	x	...	x	x	...
x	S320	S368	S384	...	S403	x	...
S396	x	x	x	...	x	S400	...

Fig. 1
(Prior Art)

100
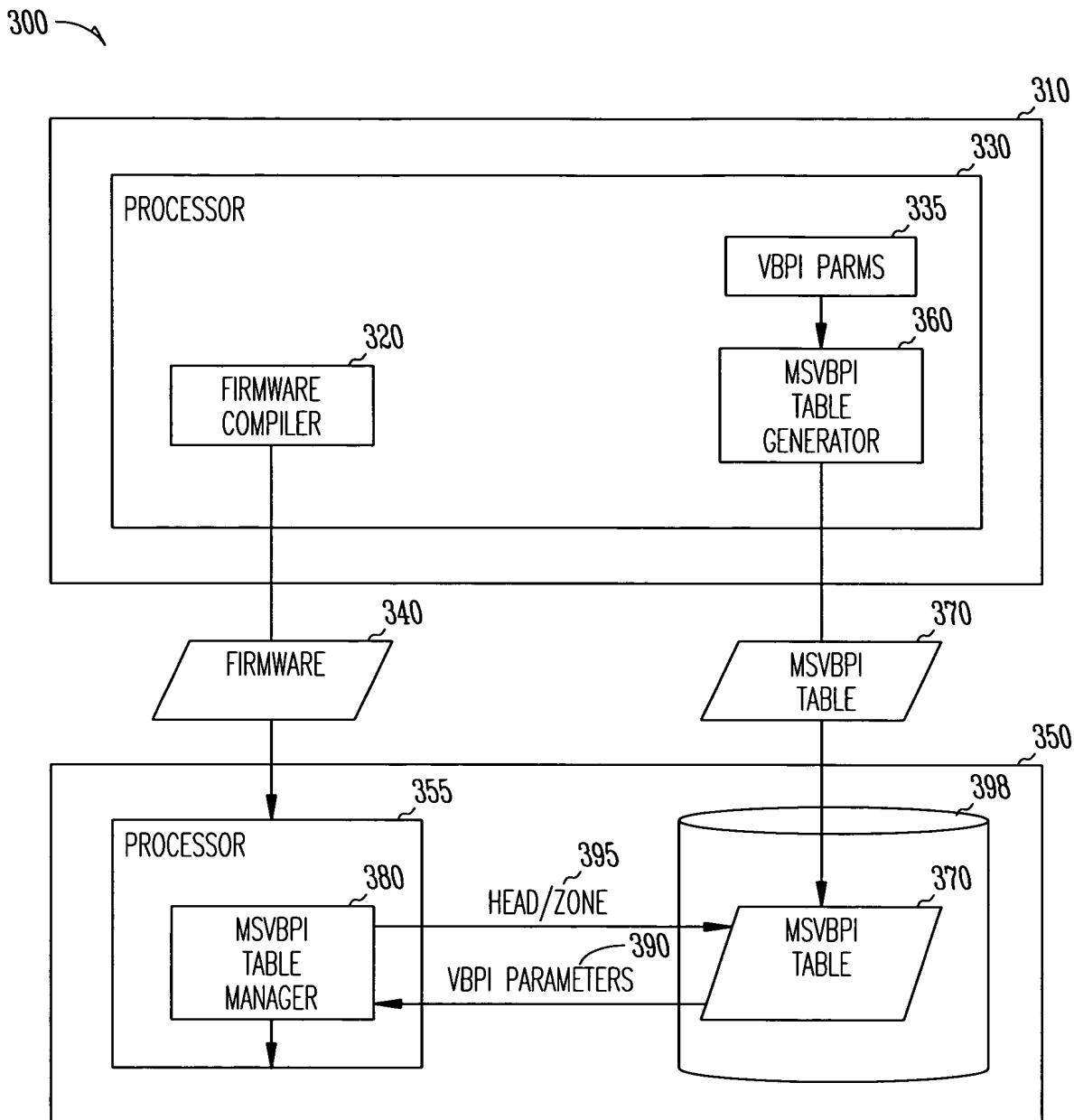
TITLE: ⬤M AND METHOD OF A MINIMIZED REPRESENTA⬤ OF A SECTOR
VARIABLE-BITS-PER-INCH TABLE
INVENTORS NAME: Chee S. Toh et al.
DOCKET NO.: 934.125US1

2/11

200 ⟶

BEGIN

210

COMPILE FIRMWARE
CODE

PREPARE VBPI TABLE ~230

YES

220

CHANGE IN VBPI
TABLE?

NO

END

Fig.2
(Prior Art)

TITLE: ⬤M AND METHOD OF A MINIMIZED REPRESENTA⬤F A SECTOR
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INVENTORS NAME: Chee S. Toh et al.
DOCKET NO.: 934.125US1

3/11

300

310
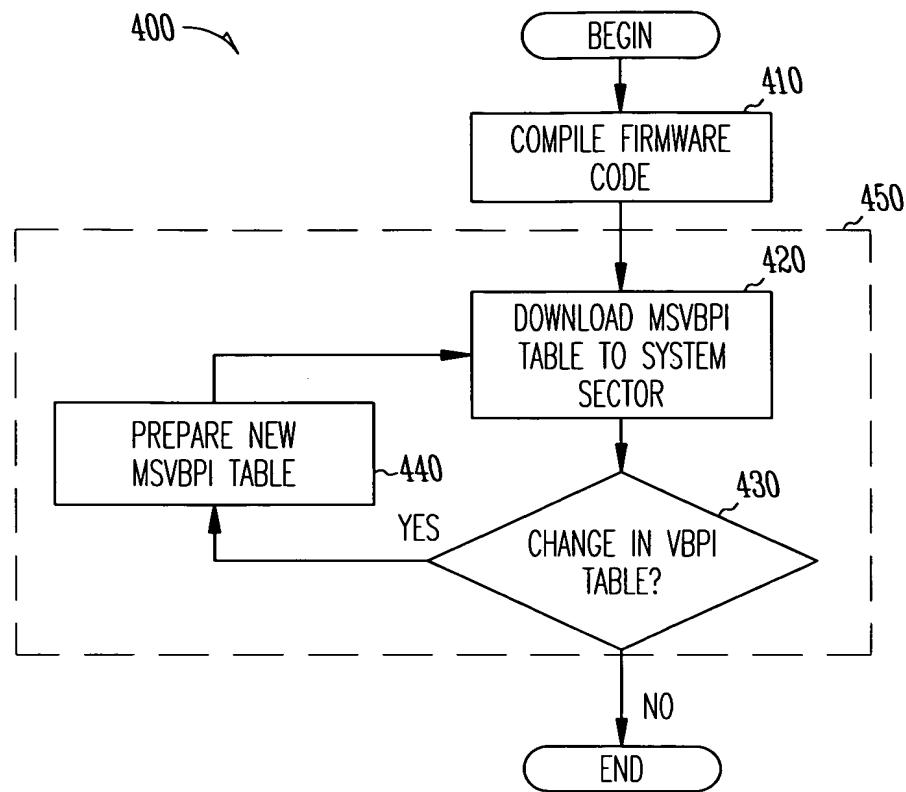
330

PROCESSOR

335

VBPI PARMS

320

FIRMWARE
COMPILER

360

MSVBPI
TABLE
GENERATOR

340

FIRMWARE

370

MSVBPI
TABLE

350

355

PROCESSOR

398

380

MSVBPI
TABLE
MANAGER

395

HEAD/ZONE

390

VBPI PARAMETERS

370

MSVBPI
TABLE

Fig.3

TITLE: ⬤M AND METHOD OF A MINIMIZED REPRESENTA⬤OF A SECTOR
VARIABLE-BITS-PER-INCH TABLE
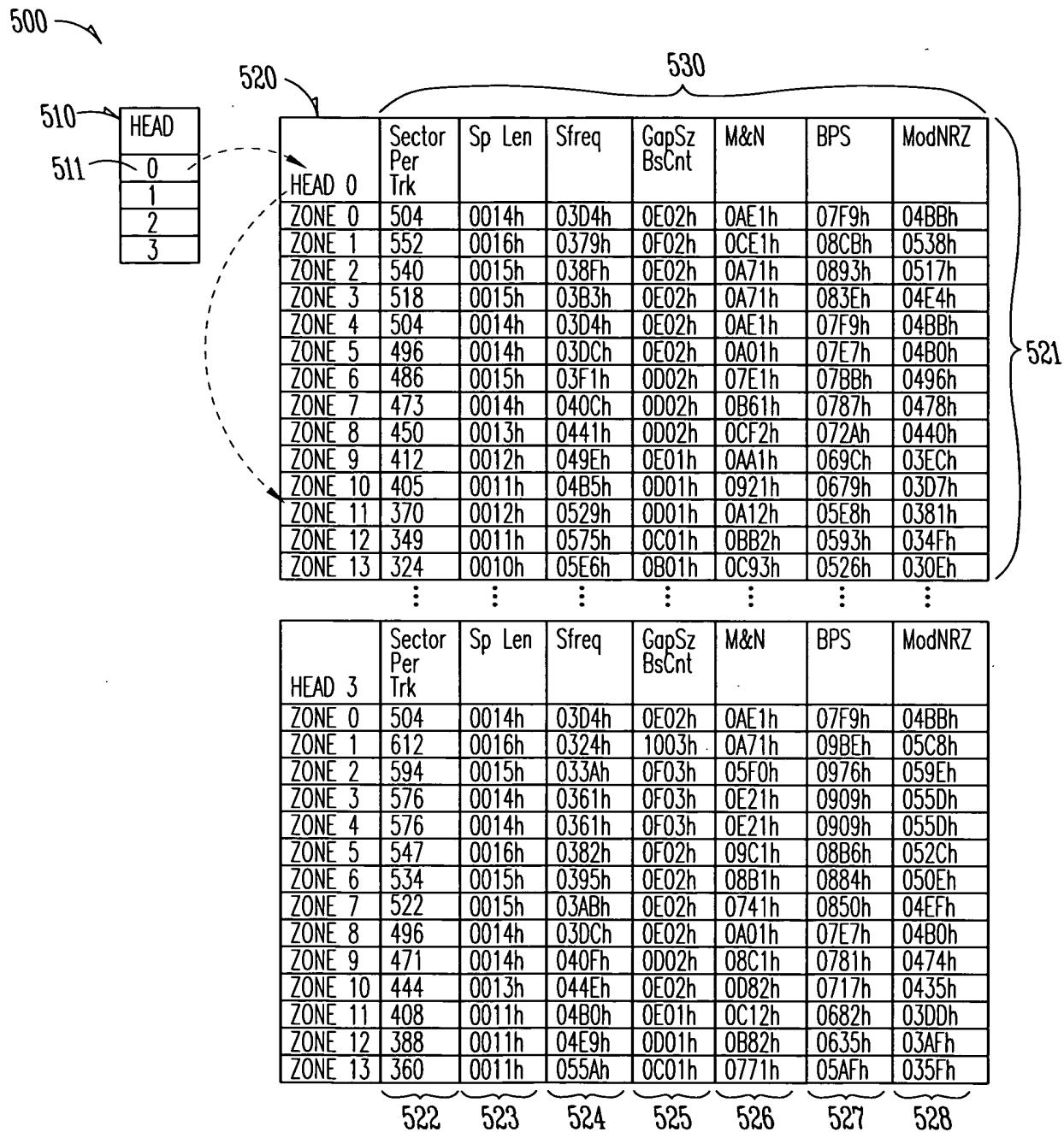INVENTORS NAME: Chee S. Toh et al.
DOCKET NO.: 934.125US1

4/11

400 ⤳

```
                              ┌──────────────┐
                              │    BEGIN     │
                              └──────┬───────┘
                                     │        410
                              ┌──────▼───────┐
                              │ COMPILE FIRMWARE │
                              │      CODE      │
                              └──────┬───────┘
                                     │        420
                              ┌──────▼───────┐
                              │ DOWNLOAD MSVBPI │
                              │ TABLE TO SYSTEM │
                              │    SECTOR      │
                              └──────┬───────┘
         ┌──────────────┐           │
         │ PREPARE NEW   │          │      430
         │ MSVBPI TABLE  │──440     ▼
         └──────────────┘    YES ◇ CHANGE IN VBPI
                                    TABLE?
                                     │
                                    NO
                              ┌──────▼───────┐
                              │     END      │
                              └──────────────┘
```

450

Fig. 4

TITLE: ●M AND METHOD OF A MINIMIZED REPRESENTA●●F A SECTOR
VARIABLE-BITS-PER-INCH TABLE
INVENTORS NAME: Chee S. Toh et al.
DOCKET NO.: 934.125US1

5/11

500

510 HEAD
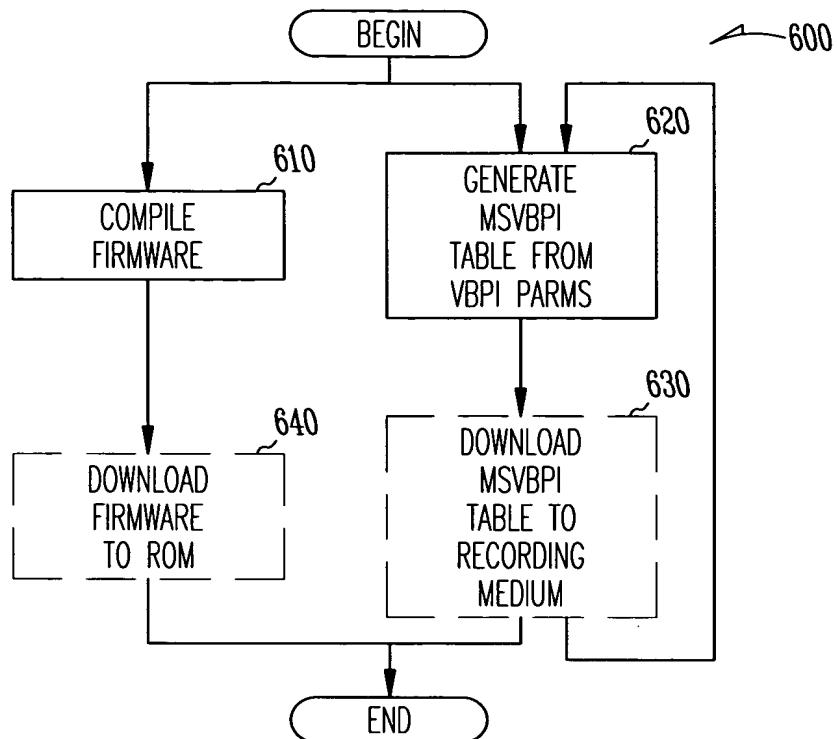511 0
1
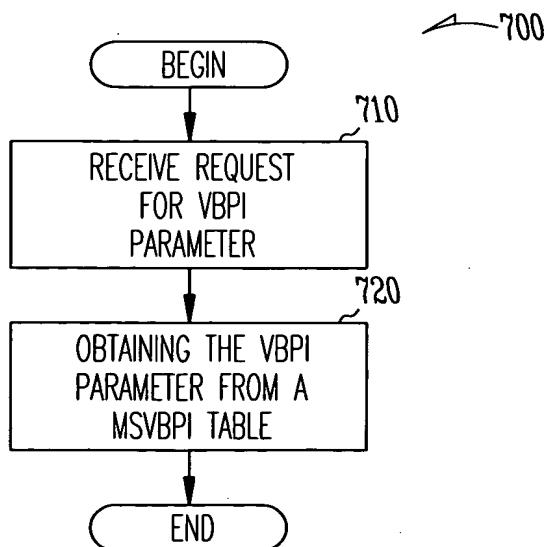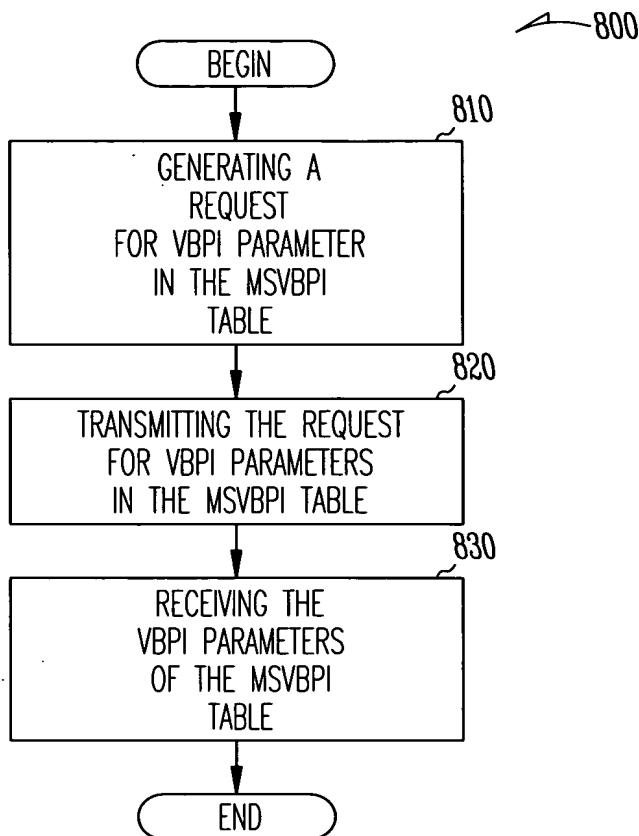2
3

520

530

HEAD 0	Sector Per Trk	Sp Len	Sfreq	GapSz BsCnt	M&N	BPS	ModNRZ
ZONE 0	504	0014h	03D4h	0E02h	0AE1h	07F9h	04BBh
ZONE 1	552	0016h	0379h	0F02h	0CE1h	08CBh	0538h
ZONE 2	540	0015h	038Fh	0E02h	0A71h	0893h	0517h
ZONE 3	518	0015h	03B3h	0E02h	0A71h	083Eh	04E4h
ZONE 4	504	0014h	03D4h	0E02h	0AE1h	07F9h	04BBh
ZONE 5	496	0014h	03DCh	0E02h	0A01h	07E7h	04B0h
ZONE 6	486	0015h	03F1h	0D02h	07E1h	07BBh	0496h
ZONE 7	473	0014h	040Ch	0D02h	0B61h	0787h	0478h
ZONE 8	450	0013h	0441h	0D02h	0CF2h	072Ah	0440h
ZONE 9	412	0012h	049Eh	0E01h	0AA1h	069Ch	03ECh
ZONE 10	405	0011h	04B5h	0D01h	0921h	0679h	03D7h
ZONE 11	370	0012h	0529h	0D01h	0A12h	05E8h	0381h
ZONE 12	349	0011h	0575h	0C01h	0BB2h	0593h	034Fh
ZONE 13	324	0010h	05E6h	0B01h	0C93h	0526h	030Eh

521

⋮ ⋮ ⋮ ⋮ ⋮ ⋮ ⋮

HEAD 3	Sector Per Trk	Sp Len	Sfreq	GapSz BsCnt	M&N	BPS	ModNRZ
ZONE 0	504	0014h	03D4h	0E02h	0AE1h	07F9h	04BBh
ZONE 1	612	0016h	0324h	1003h	0A71h	09BEh	05C8h
ZONE 2	594	0015h	033Ah	0F03h	05F0h	0976h	059Eh
ZONE 3	576	0014h	0361h	0F03h	0E21h	0909h	055Dh
ZONE 4	576	0014h	0361h	0F03h	0E21h	0909h	055Dh
ZONE 5	547	0016h	0382h	0F02h	09C1h	08B6h	052Ch
ZONE 6	534	0015h	0395h	0E02h	08B1h	0884h	050Eh
ZONE 7	522	0015h	03ABh	0E02h	0741h	0850h	04EFh
ZONE 8	496	0014h	03DCh	0E02h	0A01h	07E7h	04B0h
ZONE 9	471	0014h	040Fh	0D02h	08C1h	0781h	0474h
ZONE 10	444	0013h	044Eh	0E02h	0D82h	0717h	0435h
ZONE 11	408	0011h	04B0h	0E01h	0C12h	0682h	03DDh
ZONE 12	388	0011h	04E9h	0D01h	0B82h	0635h	03AFh
ZONE 13	360	0011h	055Ah	0C01h	0771h	05AFh	035Fh

522 523 524 525 526 527 528

Fig.5

TITLE: ⬤M AND METHOD OF A MINIMIZED REPRESENTA⬤ ⬤F A SECTOR
VARIABLE-BITS-PER-INCH TABLE
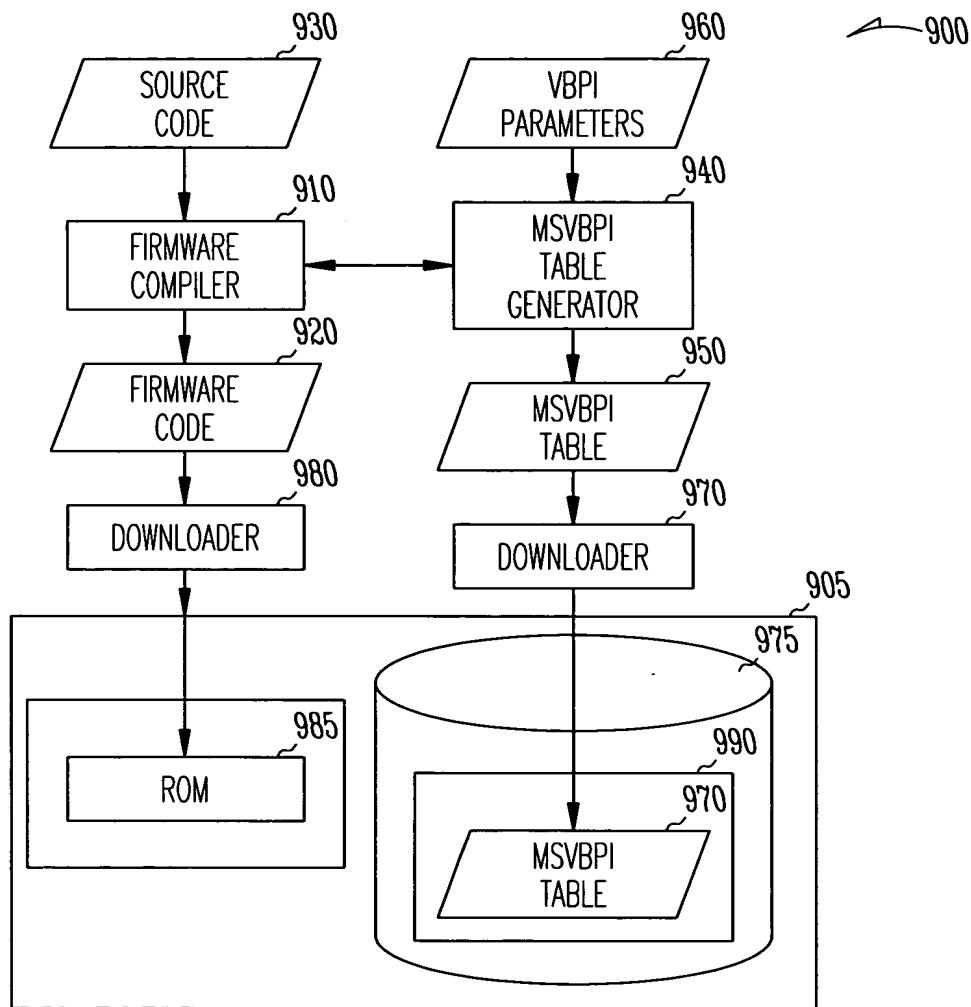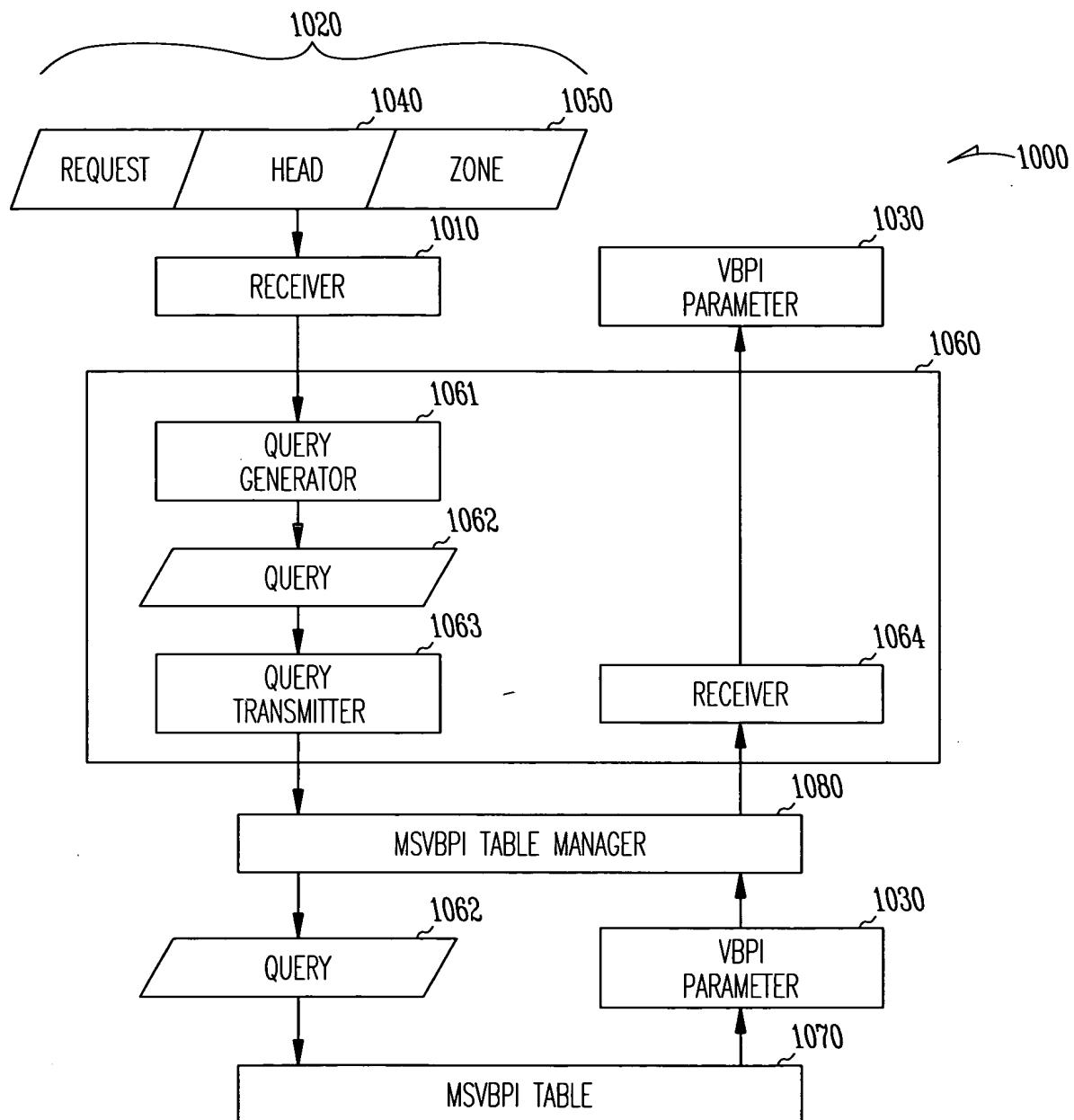INVENTORS NAME: Chee S. Toh et al.
DOCKET NO.: 934.125US1

6/11

BEGIN

~600

610
COMPILE
FIRMWARE

620
GENERATE
MSVBPI
TABLE FROM
VBPI PARMS

640
DOWNLOAD
FIRMWARE
TO ROM

630
DOWNLOAD
MSVBPI
TABLE TO
RECORDING
MEDIUM

END

Fig. 6

~700

BEGIN

710
RECEIVE REQUEST
FOR VBPI
PARAMETER

720
OBTAINING THE VBPI
PARAMETER FROM A
MSVBPI TABLE

END

Fig. 7

TITLE: ● M AND METHOD OF A MINIMIZED REPRESENTA ● F A SECTOR
VARIABLE-BITS-PER-INCH TABLE
INVENTORS NAME: Chee S. Toh et al.
DOCKET NO.: 934.125US1

7/11

800

```
            ┌─────────────┐
            │    BEGIN     │
            └──────┬──────┘
                   │
                   ▼                    810
     ┌───────────────────────────┐
     │        GENERATING A        │
     │          REQUEST           │
     │     FOR VBPI PARAMETER      │
     │       IN THE MSVBPI         │
     │           TABLE            │
     └──────────────┬────────────┘
                    │               820
     ┌───────────────────────────┐
     │   TRANSMITTING THE REQUEST  │
     │     FOR VBPI PARAMETERS     │
     │      IN THE MSVBPI TABLE     │
     └──────────────┬────────────┘
                    │               830
     ┌───────────────────────────┐
     │       RECEIVING THE         │
     │      VBPI PARAMETERS        │
     │       OF THE MSVBPI         │
     │           TABLE            │
     └──────────────┬────────────┘
                    │
                    ▼
            ┌─────────────┐
            │     END      │
            └─────────────┘
```

Fig.8

TITLE: ⬤M AND METHOD OF A MINIMIZED REPRESENTAT⬤F A SECTOR
VARIABLE-BITS-PER-INCH TABLE
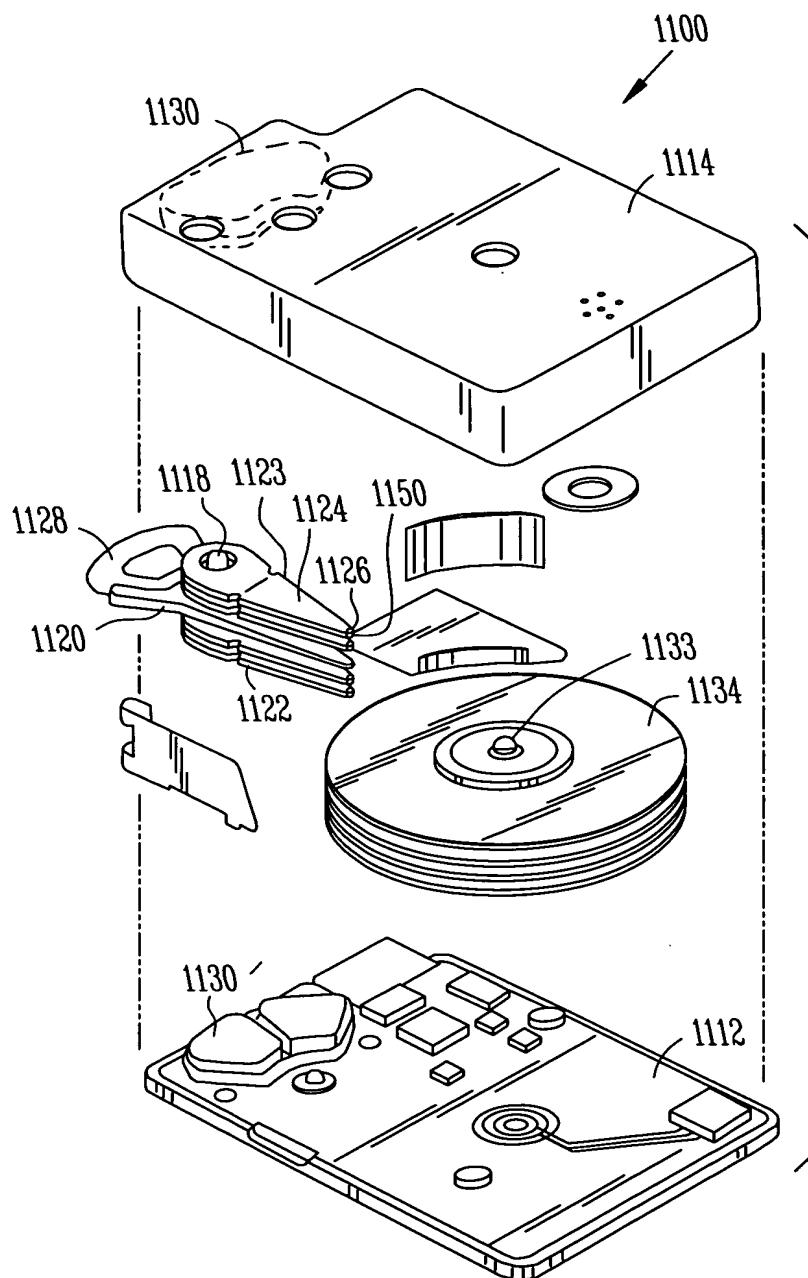INVENTORS NAME: Chee S. Toh et al.
DOCKET NO.: 934.125US1

8/11

900

930 SOURCE CODE

960 VBPI PARAMETERS

910 FIRMWARE COMPILER

940 MSVBPI TABLE GENERATOR

920 FIRMWARE CODE

950 MSVBPI TABLE

980 DOWNLOADER

970 DOWNLOADER

905

975

985 ROM

990

970 MSVBPI TABLE

Fig.9

Fig. 10

TITLE: ⬤ AND METHOD OF A MINIMIZED REPRESENTAT⬤ A SECTOR
VARIABLE-BITS-PER-INCH TABLE
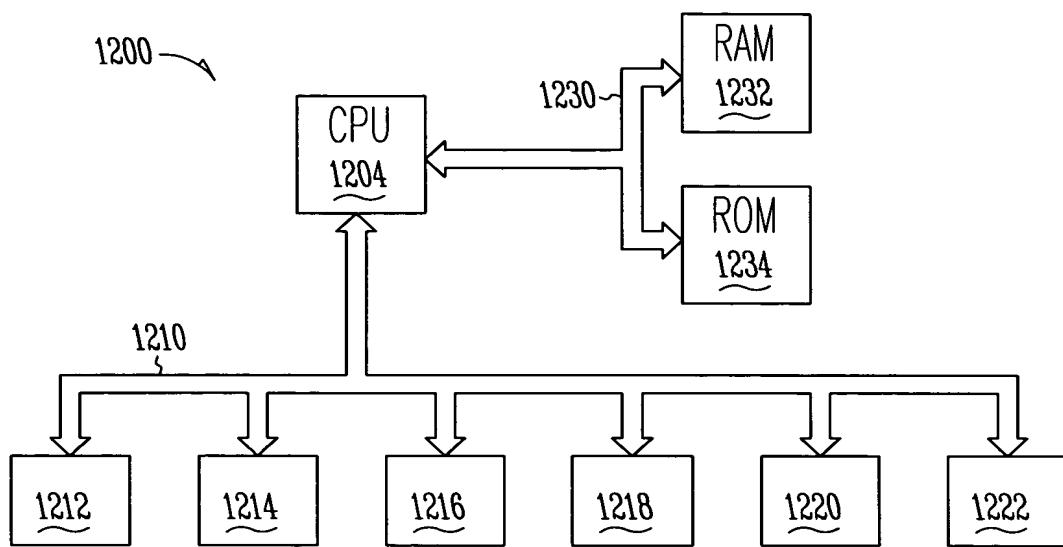INVENTORS NAME: Chee S. Toh et al.
DOCKET NO.: 934.125US1

10/11

Fig. 11

TITLE: ███EM AND METHOD OF A MINIMIZED REPRESENT██ OF A SECTOR
VARIABLE-BITS-PER-INCH TABLE
INVENTORS NAME: Chee S. Toh et al.
DOCKET NO.: 934.125US1

11/11

1200

CPU
1204

1230

RAM
1232

ROM
1234

1210

1212

1214

1216

1218

1220

1222

Fig. 12